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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,605	01/27/2004	Bo Valdemar Vaaben	7784-000948	1393

27572 7590 10/06/2011
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EXAMINER

JOSEPH, TONYA S

ART UNIT	PAPER NUMBER
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3628

MAIL DATE	DELIVERY MODE
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10/06/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/765,605	Applicant(s) VAABEN ET AL.	
	Examiner TONYA JOSEPH	Art Unit 3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 45-54 is/are pending in the application.
- 5a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 45-54 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☐ The specification is objected to by the Examiner.
- 11) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/25/2010 has been entered.

Response to Arguments

Applicant's arguments filed 10/25/2010 have been fully considered but they are not persuasive.

Applicant further argues with respect to Yu, "there is simply nothing in Yu to suggest using its teachings in combination with Slivka to address rescheduling both crew members and passengers when a flight disruption occurs". The Examiner disagrees. Yu is plainly directed to both crew member rescheduling and passenger rescheduling due to disruptions. Specifically Yu teaches:

SUMMARY OF THE INVENTION

An automated, real-time, decision support system for reassigning, rescheduling, and rerouting aircraft in response to flight operation disruptions, in which **sets of optimal solutions are provided through use of evaluation statistics such as** the quantity of cancelled flights, **cancelled passengers**, delayed flights, **delayed passengers**, delayed flight minutes,

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swapped flights, **and displaced passengers**, as well as flight revenue and the costs related to flight operations, flight cancellations, flight delay minutes, flight swaps, **and displaced passengers**, to assist operations management in selecting the optimal solution best conforming to operational constraints and user requirements (see Col. 4 lines 33-44).

As plainly shown above, Applicant's assertions that Yu is **not** concerned with rescheduling passengers on an aircraft and is strictly directed to crew members is erroneous. It is simply not true that Yu does not consider both passenger and crew re-accommodations. Yu describes,

The Aircraft Optimization Engine 1 in turn initializes a Crew Optimization Engine 5 by way of a bi-directional communication path 6 to determine whether the optimal flight solutions are efficiently supported by flight and service crews (see Col. 8 lines 1-5) Applicant has also amended the claims to include considering feasibility constraints when trying to determine an optimal solution. This is also described in the cited references. Yu teaches

Applicant's amendment does nothing to remedy the obviousness of the claim and the invention as a whole. It is obvious, as shown by the applied references, that considering the impact of passengers, crew and a fleet when trying to or schedule passengers and/or solve an optimization problem is very old and well known. Rather than continue to argue the references individually, Applicant should attempt to describe any supposed error in the combination of references.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 45-48 and 50-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slivka U.S. Pre-Grant Publication No. 2003/0225600 A1 in view of Yu U.S. Patent No. 6,314,361 B1 in further view of Yu et al. U.S. Patent No. 6,408,276 B1, (hereinafter; "Yu II") and Official Notice.

3. As per claim 45, Slivka teaches

providing scheduling information in a computer readable medium for the at least one affected mobile platform and for other mobile platforms to a computer system that implements an integration engine (see para. 36);

using the integration engine and the scheduling information to generate a disruption specification based upon an event (see para. 36), the disruption specification including data identifying passengers and crew members needing to be rescheduled from travel on an initial mobile platform, and penalty cost information relating to available actions that may be taken to recover from the disruption and to rebook passengers on two or more alternative itineraries (see para. 36, 52 and claim 13); using a processing subsystem to implement:

a fleet engine to obtain information from the integration engine regarding the disruption specification, and to generate information relating to alternative mobile

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platforms that are available for use in connection with a new itinerary (see para. 36, the Examiner is interpreting the re-accommodation driver to be the fleet and passenger engine);

the fleet engine eliminating a subset of initial potential recovery solutions that do not meet any one of feasibility or legality consideration (see para. 52), and to generate a plurality of possible recovery solutions (see para. 46-47 and 52);and

using a passenger engine to receive the possible recovery solutions and to generate information relating to constraints affecting passengers scheduled for travel on the initial mobile platform (see para. 36); and

further using the passenger engine to generate one of an overall solution or a plurality of ranked rescheduling solutions for a group comprising one of the passengers (see para. 46-47 and 52) or the crew members.

Slivka does not explicitly teach the limitation taught by Yu

a crew engine to obtain information from the integration engine regarding the disruption specification, and generate information relating to constraints for crew members scheduled to travel on the initial mobile platform (see Col. 4 lines 33-44);

the disruption specification including data identifying crew members (see Col. 8 lines 1-12). It would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the method of Slivka to include the teachings of Yu to provide re-accommodation options for all subjects aboard a disrupted mobile platform. Slivka does not explicitly teach the limitation taught by Yu II, the crew engine eliminating a subset of initial potential recovery solutions that do not meet any one of feasibility or legality

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consideration, and to generate a plurality of possible recovery solutions (see Col. 15 lines 56-67 and Col. 16 lines 1-24). It would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the method of Slivka to include the teachings of Yu and Yu II to provide re-accommodation options for all subjects aboard a disrupted mobile platform.

While Slivka does not explicitly disclose that the above steps are done simultaneously and in parallel, there is nothing in the method as performed by Slivka that would preclude the flight and passenger information being obtained simultaneously and in parallel. Official Notice is taken that performing rescheduling solution simultaneously and in parallel is old and well known in the art of disruption optimization. The decision to perform the steps simultaneously and in parallel is a mere design choice and does not render the claim unobvious *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice). The re-accommodation driver is not explicitly referred to as distinct "engines", however identity of terminology in a prior art reference is not a requirement for anticipation under § 102 or obviousness under §103. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

4. As per Claim 46, Slivka in view of Yu, Yu II and Official Notice teaches the method of claim 45 as described above. Slivka further teaches using the integration engine to obtain the information generated by one or more of the fleet engine, the crew engine and the passenger engine, and to use the obtained information to determine potential rescheduling solutions acceptable for the passengers (see para. 36 and 47).

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Yu teaches rescheduling solutions for crew members (see Col. 8 lines 1-12). It would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the method of Slivka to include the teachings of Yu to provide re-accommodation options for all subjects aboard a disrupted mobile platform.

5. As per Claim 47, Slivka in view of Yu, Yu II and Official Notice teaches the method of claim 45 as described above. Slivka further teaches using the re-accommodation driver to generate information to be considered by the integration engine (see para. 36). Although Slivka does not teach separate engines, the mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) Yu teaches using a crew engine to generate information (see Col. 8 lines 1-12). It would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the method of Slivka to include the teachings of Yu to provide re-accommodation options for all subjects aboard a disrupted mobile platform.

6. As per 48, Slivka in view of Yu, Yu II and Official Notice teaches the method of claim 45 as described above. Slivka further teaches wherein the integration engine creates the disruption specification using: a time frame within which the rescheduling solutions are to be carried out, the time frame comprising midnight of the day that the scheduling disruption occurs (see para. 52); and resources including identifying one or more mobile platforms that have been affected by the scheduling disruption (see para. 36).

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7. As per Claim 50, Slivka in view of Yu, Yu II and Official Notice teach the method of claim 45 as described above. Slivka further teaches wherein:

the engine operates to generate initial information related to at least one of:

connection constraints for the crew members;

a cancellation penalty cost value (see para. 23 and claim 13); and

wherein the fleet engine generates information related to at least one of:

available standby mobile platforms;

cancellation penalties (see para. 23 and claim 13); and

a preferred latest departure time of any one or more mobile platforms affected by the scheduling disruption.

Slivka does not explicitly teach the limitation taught by Yu II crew member limitations involving at least latest crew departure times that may be permitted under rules or laws governing work of crew members on the mobile platform (see Col. 15 lines 56-67 and Col. 16 lines 1-24); It would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the method of Slivka to include the teachings of Yu to provide re-accommodation options for all subjects aboard a disrupted mobile platform. Slivka does not explicitly teach the limitation taught by Yu II, the crew engine eliminating a subset of initial potential recovery solutions that do not meet any one of feasibility or legality consideration, and to generate a plurality of possible recovery solutions (see Col. 15 lines 56-67 and Col. 16 lines 1-24). It would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the

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method of Slivka to include the teachings of Yu and Yu II to provide re-accommodation options for all subjects aboard a disrupted mobile platform.

The re-accommodation driver is not explicitly referred to as distinct "engines", however identity of terminology in a prior art reference is not a requirement for anticipation under § 102 or obviousness under §103. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

8. As per Claim 51, Slivka in view of Yu, Yu II and Official Notice teach the method of claim 45 as described above. Slivka further teaches:

wherein the passenger engine operates to generate the information used for generating potential rescheduling solutions by creating a plurality of subproblems (see para. 7), with each said subproblem defining a set of all passengers that are displaced from the same segment of travel of the initial itinerary (see para. 7 and 46);

wherein the passenger engine applies a first algorithm to the subproblems, where the first algorithm is constrained to the initial itinerary for each passenger in each said subproblem, to generate alternative itineraries for a first subset of all of the passengers (see para. 14 and 34), and further identifying those passengers excluded from the first subset that have been deemed to be unsuitably rescheduled through the use of the first algorithm (see para. 46 and 47); and

further comprising using a second algorithm that is not constrained to the initial itinerary, for those said passengers defining a second subset of all the passengers, that were deemed to be unsuitably rescheduled through the rescheduling solutions

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generated by the first algorithm, to generate additional rescheduling solutions for the second subset of passengers (see para. 47 and 51).

9. As per Claims 52 and 53, Slivka teaches providing scheduling information in a computer readable medium for the at least one affected mobile platform and for other mobile platforms to a computer system that implements an integration engine (see para. 36);

using the integration engine and the scheduling information to generate a disruption specification based upon an event (see para. 36), the disruption specification including data identifying passengers and crew members needing to be rescheduled from travel on an initial mobile platform, and penalty cost information relating to available actions that may be taken to recover from the disruption and to rebook passengers on two or more alternative itineraries (see para. 36, 52 and claim 13); using a processing subsystem to implement:

a fleet engine to obtain information from the integration engine regarding the disruption specification, and to generate information relating to alternative mobile platforms that are available for use in connection with a new itinerary (see para. 36, the Examiner is interpreting the re-accommodation driver to be the fleet and passenger engine);

the fleet engine eliminating a subset of initial potential recovery solutions that do not meet any one of feasibility or legality consideration (see para. 52), and to generate a plurality of possible recovery solutions (see para. 46-47 and 52);

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and a passenger engine to generate information relating to constraints affecting passengers scheduled for travel on the initial mobile platform (see para. 36); and further using the passenger engine to generate one of an overall solution or a plurality of ranked rescheduling solutions for a group comprising one of the passengers (see para. 46-47 and 52);

wherein the potential rescheduling solutions are presented in: a first subset of the passengers that have rescheduling solutions that are deemed to be acceptable; and a second subset of the passengers not included in the first subset that are deemed to be unacceptably rescheduled (see para. 46-47 and 51);.

Slivka does not explicitly teach the limitation taught by Yu

a crew engine to obtain information from the integration engine regarding the disruption specification, and generate information relating to constraints for crew members scheduled to travel on the initial mobile platform, (see Col. 4 lines 33-44);

the disruption specification including data identifying crew members (see Col. 8 lines 1-12). It would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the method of Slivka to include the teachings of Yu to provide re-accommodation options for all subjects aboard a disrupted mobile platform.

Slivka does not explicitly teach the limitation taught by Yu II, the crew engine eliminating a subset of initial potential recovery solutions that do not meet any one of feasibility or legality consideration, and to generate a plurality of possible recovery solutions, the constraints including a latest departure time (see Col. 15 lines 56-67 and Col. 16 lines 1-24). It would have been prima facie obvious to one of ordinary skill in the

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art at the time of invention to modify the method of Slivka to include the teachings of Yu and Yu II to provide re-accommodation options for all subjects aboard a disrupted mobile platform.

While Slivka does not explicitly disclose that the above steps are done simultaneously and in parallel, there is nothing in the method as performed by Slivka that would preclude the flight and passenger information being obtained simultaneously and in parallel. Official Notice is taken that performing rescheduling solution simultaneously and in parallel is old and well known in the art of disruption optimization. The decision to perform the steps simultaneously and in parallel is a mere design choice and does not render the claim unobvious *In re Kuhle*, 526 F.2d 553, 188 USPQ 7 (CCPA 1975) (the particular placement of a contact in a conductivity measuring device was held to be an obvious matter of design choice). The re-accommodation driver is not explicitly referred to as distinct "engines", however identity of terminology in a prior art reference is not a requirement for anticipation under § 102 or obviousness under §103. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

10. As per Claim 54, Slivka in view of Yu in further view of Yu II teaches the method of claim 53 as described above. Slivka further teaches using a fleet engine to obtain information from the integration engine regarding the disruption specification and information relating to alternative mobile platforms that are available for use in connection with a new itinerary; and using the information relating to alternative mobile platforms in forming the potential rescheduling solutions (see para. 14 and 49).

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11. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Slivka U.S. Pre-Grant Publication No. 2003/0225600 A1 in view of Yu U.S. Patent No. 6,314,361 B1 in further view of Yu et al. U.S. Patent No. 6,408,276 B1, (hereinafter; “Yu II”) and Official Notice.

12. As per Claim 49, Slivka in view of Yu, Yu II and Official Notice teaches the method of claim 45 as described above. Slivka further teaches wherein one or more of the fleet engine, the crew engine and the passenger engine evaluate feasibility and penalty cost information in generating the potential rescheduling solutions (see para. 50 and claim 13). Slivka does not explicitly teach evaluating the legality in generating a potential solution. Official Notice is taken that considering legality in generating a potential solution is old and well known in the art of travel systems). It would have been prima facie obvious to one of ordinary skill in the art at the time of invention to modify the methods of Slivka and Yu to include the teachings of Official Notice to be ensure compliance with FAA rules.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TONYA JOSEPH whose telephone number is (571)270-1361. The examiner can normally be reached on Mon-Fri, 7:30 am-5:00pm First Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571 272 6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TONYA JOSEPH/
Examiner, Art Unit 3628